Assessing the impacts of climate change on best management practice implementation strategies


The effects of climate change on future water availability and water quality are not well understood, making the development of watershed management plans difficult for decision-makers. Agricultural best management practices (BMPs) are commonly implemented to mitigate non-point source (NPS) pollution, but future effectiveness is unknown due to climate change. To address these problems, the following research objectives were developed: (1) quantify the impacts of climate change on water quantity and water quality, (2) assess BMP effectiveness in current and future climate scenarios, and (3) determine the reliability of BMPs in future climates by performing a sensitivity analysis. The Soil and Water Assessment Tool (SWAT), a physically-based watershed model, was coupled with climate change data from the National Center for Atmospheric Research (NCAR) Community Climate System Model (CCSM-3) for the Tuttle Creek Lake watershed of Kansas and Nebraska. Eight agricultural BMPs were represented within the SWAT model framework: conservation tillage, contour farming, filter strips, grazing management, native grass, no-tillage, porous gully plugs, and terraces. Results indicate that water quantity and pollutant yields will likely increase in future climates. Native grass, terraces, and contour farming were determined to have the highest mean annual reduction efficiencies for all pollutants in current and future scenarios, while porous gully plugs were least efficient. Native grass, filter strips and grazing management were the least reliable under all climate scenarios due to high sensitivity.
Investigating the role and scale of transactions costs of incentive-based programs for provision of environmental services in developing countries

The use of incentives for the provision of environmental services occupies a critically important place in the international development agenda. The use of local approaches for watershed services provision and international efforts for global provision of climate change land-based mitigation services are among promising management options. These two options have the potential to significantly reduce the overall costs of meeting environmental targets through market-based institutional arrangements. Despite widespread agreement that transaction costs are important, existing research has not yet considered the scale and role of transaction costs in determining: 1) the rate of adoption of incentive-based schemes for the provision of watershed services in the developing world, and 2) the supply of mitigation services associated with avoided emissions from deforestation, particularly in a developing country context. To address the former, the first chapter of this dissertation identifies patterns of adoption and the exogenous and endogenous factors that help to explain the number of incentive-based programs adopted during the last decade. Using an econometric model, it suggests that the degree of adoption can be interpreted as diffusion of interdependent induced institutional innovations. The second chapter presents a conceptual framework for transaction costs and reports results of field data collection and empirical estimates of the scale of transaction costs of mitigation through land-based activities in Ecuador taking place under alternative incentive-based institutional arrangements. The third chapter of this dissertation develops an econometric model to estimate the elasticity of land supply in Ecuador and evaluates the effect that transaction costs have on incentive-based mitigation activities. Knowledge generated from this research aims at enriching the scholarly debate on policy diffusion and climate change policy and provides critical insights for policymakers interested in incentive-based institutional arrangements for the provision of environmental services.

Nation-building in the Guatemalan countryside

This thesis seeks to explain why Guatemala's military-government escalated its use of violence in the countryside from 1978 to 1985. Antonio Gramsci's hegemony theory is used as a theoretical perspective to guide the analysis of this work. In
terms of Gramsci, the military engaged in extreme violence against individuals, institutions, and whole communities because they were perceived to be part of a counter-hegemonic movement that threatened the military-dominated status quo. As a result, the military attempted to destroy these social movements and replace them with military-dominated institutions like model villages and civil patrols. Furthermore, the military tried to gain the allegiance of the rural populace through social programs and ideological indoctrination. These initiatives were designed to increase the hegemony of the military in the eyes of the rural inhabitants.

Keywords: Guatemalan military, Mayans, political violence, authoritarian revolution, Antonio Gramsci.


This dissertation interrogates connections between agricultural restructuring, development of rural livelihoods and conservation of agricultural biodiversity (agrobiodiversity) in Turkey, a center of origin and diversity for wheat domestication. Often, crisis narratives accompany these connections, reflected as simplified assumptions about transformations of nature, livelihoods and the state under neoliberalism. Through a multiscalar analysis that attends to state-international relations, ways the state articulates development and conservation policies and ways farmers engage with these policies, this dissertation argues that the crisis narrative is used to justify dominant solutions for conservation of agrobiodiversity and development of livelihoods. By engaging with different aspects of transformation under neoliberalism, in particular Turkey's 2006 Seed Law, the World Bank funded Agricultural Reform Implementation Program, and changes due to European Union accession, the dissertation treats current transformations as a snapshot of complex change for the role of the state, farmers' livelihoods and conservation of agrobiodiversity.

The dissertation shows how neoliberal development and conservation practices have come to dominate (and yet appear beyond the reach of) global economic, political and environmental policy circles, and demonstrates the effects of such practices on access to agrobiodiversity and livelihood strategies. The dissertation is based on empirical research and archival work conducted in Turkey over eight months between 2007 and 2010. Methods included (1) semi-structured interviews with state officials and representatives of international, farmer and non-governmental organizations in Ankara and (2) ethnographic research and participant observation in the villages of two provinces in northwest and central
Turkey, Kastamonu and Sivas, where traditional wheat varieties are grown. I link the empirical findings to broader analysis that connects North and South by drawing on postcolonial theory, development geography and political ecology to make two broad arguments. (1) Instead of a moment of crisis that can be solved through neoliberalism, current development practices in Turkey reflect both power struggles within the state and the historical continuity of earlier state projects of modernization and Europeanization. (2) The effects of markets on conservation of agrobiodiversity and livelihoods were diverse and contingent on internal dynamics of perceptions and articulations of farmers with external dynamics of interventions at local or national scale. As a result, neoliberal conservation cannot fulfill its double promise of serving livelihoods and conservation of nature.

By challenging the crisis narrative, these findings contribute to our understanding of sustainability of development and conservation more broadly, particular with regard to food security, farming communities, and crop improvement in developing country contexts. First, these findings show that neoliberalism translates into local contexts through a process of articulation, reworking and negotiating of economic and conservation policies, reminding us of the friction caused by physical nature in neoliberalization. Second, these findings challenge the neoliberal premise that markets always can provide development and conservation better than the state or international organizations. Third, the dissertation deepens the discussions on neoliberal subject formations by discussing the limited role of farmers in neoliberal conservation practices in relation to the state's contradictory goals of encouraging agrobiodiversity use by farmers and maintaining sovereignty over plant resources.

Women's Religious Discussion Circles in Urban Bangladesh: Enacting, Negotiating and Contesting Piety

The dissertation explores the lives of educated, urban, Bangladeshi women who come together in religious discussion circles, known as Talim, Tafsir, Islam class, Dars and Quran class, to learn about the Quran and Hadith, and to strive towards a life where Islam has a greater presence than in the past. The dissertation is based on research on three learning circles in Dhaka, the capital city of Bangladesh. Set against the backdrop of fear and suspicion amidst secular-leaning educated people in Dhaka whereby personal pursuits of piety are equated with Islamism and fundamentalism, regress and anti-nationalism, the dissertation provides detailed accounts of women's own narratives, which counter negative stereotypes and present an insider's perspective on women's conscious, deliberate enactment of a
piety that is framed as current and modern. The women argue that their pursuit of piety is distinct from religious groups who seek political power, claiming that their main interest is to reform themselves and invite others to change in similar ways. Based on their understanding of edicts from the Quran and Hadith, women's changes include practices and the appropriation of external forms that are intended to silence and condition inner dissident desires. The dissertation argues that in attaining or in the strife to attain an alignment between the external and internal, women negotiate both with the normative standards of piety as well as assert their opinions and a sense of agency Vis a Vis family and friends. Such self-assertion through new ideas reconfigures important relationships between husbands and wives and parents and children whereby women feel in greater control of themselves as well as others. Positive changes in their lives lead women to take on the public space through preaching and activism. These "public tasks" are undertaken strategically whereby the initiatives are framed as pro-culture and nationalistic. Determined to de-link Islam from Islamists, women reform themselves and moralize the public space and consequently bring to the Bangladeshi religious terrain a novel and well calculated way of being what they consider pious, critical, reflective, progressive, nationalist and modern.

A Better Strategy? The Evolving Livelihood Strategies of Caribbean Banana and Sugar Workers in a Globalised Economy


Across the developing world, globalisation is forcing tremendous change on the economies and societies that it encounters; the small agricultural economies of the Caribbean are no exception. The globalisation of governance and the rapid liberalisation of trade has systematically worked against the previously protected sugar and banana industries in Trinidad, St. Kitts and St. Vincent. This devastating trend has resulted in the sugar industry closures in Trinidad and St. Kitts while orchestrating serious declines in banana revenue for St. Vincent. This study uses an actor-oriented framework of analysis to examine and understand the types of coping strategies being used by rural folk in times of economic crisis. The findings from this study suggest that all groups of rural workers have been affected by the fate of the agro-industries, but some more so than others. The findings further suggests that although a plethora of coping strategies are being deployed to protect the integrity of the household and its members there are structural and institutional factors that enable or prevent the creation of meaningful sustainable livelihoods.
A comparative analysis of the contributions of mainstream and alternative tourism models to development: A case study of tourism operations in Penang, Malaysia


Tourism development is vigorously pursued the world over for its economic benefits. This development takes very different forms, from all-inclusive beach resorts to family run guesthouses, and their respective impact is oftentimes just as different. However, it is not as simple as to say one form is good, the other bad. In reality there is sufficient evidence to suggest that particular forms are best suited to particular conditions, and sometimes both and sometimes neither mainstream or new tourism is appropriate. This thesis endeavours to assess the positive and negative impacts of mainstream and "new" tourism development in economic, socio-cultural, and environmental terms.

A comparative study to identify factors affecting adoption of soil and water conservation practices among smallhold farmers in the Njoro River watershed of Kenya


Natural resource conservation is important for human well-being, especially in fragile environments of developing countries. This study occurred in 2006 among 6,500 smallhold farmers residing along a 25-km segment of a heavily utilized river. Research objectives were to determine use and adoption constraints for 14 soil and water conservation practices (SWCPs). Farms were reportedly contributing to a decline in river water quality via soil erosion. Recent occupation of the upper watershed by immigrants magnified concerns that resource degradation could escalate. A multi-method approach incorporating quantitative surveys, qualitative interviews, and participant observation was used to interpret constraining factors within the biophysical and historical context of the watershed. Adoption rates for SWCPs were expected to be low (less than 20 percent). Increased formal education, income, access to information, and security of land tenure and soil characteristics, were expected to positively influence adoption. Data analysis included descriptive statistics and use of classification and regression trees. Results indicated that all sampled farms had adopted at least two SWCPs, with an average of six per farm. Favorated practices were those that were easier to implement and more effective for resource protection and food production. Years in residence
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(tenure security) and income emerged as primary explanatory variables for adoption of SWCPs, while soil quality and formal education were secondary. Only 27 percent of surveyed farmers held title deeds, but the others perceived that land occupation conferred "ownership" and hence implemented SWCPs. A follow-up visit in 2009, after the region had endured a year of highly publicized ethnic conflict, immigration and farm expansion continued with SWCPs being adopted. Njoro communities mostly remained intact and appeared resilient. While small farms likely contribute to watershed-scale problems and declines in quality and quantity of water in the River Njoro, farmers have made remarkable strides – largely on their own – to conserve natural resources. Future research should examine how a general lack of infrastructure off-farm and study-site context contributes to reduced watershed-resource quality. Further protection of soil and water is best served by a more aggressive policy and extension education framework that links food security, household well-being, and natural resource management.

Adaptive Place-Making and Urban Agriculture Inform the Design of a Portuguese Canadian Cultural Center in West Toronto

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Immigrants to Canada bring their culture with them when they move; they also bring with them different understandings of dwelling and public place. As a result, they often modify existing urban patterns in a meaningful and interesting manner. This thesis explores the productive and creative adaptations that immigrant populations are making to the urban environment by considering the adaptations made by the Portuguese Canadians in Toronto, Ontario. Seizing upon their propensity for mixing hardscapes and agriculture in unexpected and strategic ways, and upon a desire to create community space, a new urban typology is proposed, one that is inspired by an understanding of urban life that seeks to engage the urban condition and its rich tapestry of materials, people and customs. This understanding of urban dwelling does not romanticize nature as an escape from the city and its ills, but rather embraces the potential to engage with the city and with each other in a different way. The resulting design for a cultural center is an urban infill project that reinforces reciprocal notions of productivity and consumption as it creates spaces to foster cultural continuity within the Portuguese Canadian community in Toronto.
After the Grapes Are Picked: An Exploration of Wine and Wine-Grape Crop Production in California

The narratives presented in wine-themed materials present a partial understanding of wine production and thereby de-emphasize vineyard workers' contribution to the process. This study uses content analysis to identify prevalent themes in novice-aimed wine texts and participant observation to document key themes in one winery tour presentation. The study finds the primary aim of these sites is to acquaint consumers' with proper wine tasting practices and to instill consumer confidence in their judgments of wine. To bridge the gap between the sites of consumption and production, in-depth interviews are conducted with Mexican-origin vineyard workers in Santa Barbara County to explore their viticultural experiences. Interview findings reveal vineyard work produces economic and health challenges similar to other crop industries. However, the care wine grapevines require may differently inform the work environment relative to field crops. The increased importance of wine grape production to California's economy necessitates an examination of workers within this industry.

After the fog of reform: Democratic consolidation in Mexico and Turkey

Mexico and Turkey experienced significant changes in their political systems in recent decades including a series of reforms to improve their semi-democratic regimes. Both countries had established similar political and socio-economic structures in the early years of their modern republican regimes. Protectionist, state-led development models and highly regulated, corporatist forms of interest mediation continued until they faced severe crisis in the 1980s. Subsequently, both countries adopted the hegemonic neoliberal model. Rapid economic liberalization initiatives were coupled with gradual expansion in political rights and civil liberties. At the turn of the new millennium, the political apertura had beared fruit in Mexico as it successfully ended the seven-decade long single party rule through peaceful, electoral means. Despite its strong centralist state legacy, Mexico managed to improve its democratic status by establishing genuinely competitive elections and expanding its democratic space to include a vocal and pluralist civil society. While Mexico seems to have beaten its structural odds, Turkey continues to struggle with the same political problems that haunted its democracy relentlessly. When we consider Turkey's long experience with multi-party politics...
and its close engagement with the EU—a quintessentially democratic union, the underperformance of Turkey becomes even more puzzling. This dissertation attempts to grasp the mechanisms behind the apparent performance gap in the democratic deepening of Mexico and Turkey through a comparative historical framework of analysis.

A GIS approach to prioritize private landholdings in the Lower Kaskaskia River corridor incorporating migratory bird habitat criteria


Loss of forested area and corresponding increase in forest fragmentation has decreased Neotropical migrant bird habitat quality across the Midwestern United States. Typically, efforts to increase habitat quality by reforestation of agricultural areas are done on a first come, first serve basis. In order to increase the efficiency of these restoration efforts, a prioritized ranking system is needed to obtain the greatest increase in habitat quality possible for the fewest amount of hectares restored to forest. This project examines the use of a GIS based multi-criteria approach to prioritize lands for reforestation in the Kaskaskia River Corridor (KRC), Illinois. We prioritized areas for reforestation based on nine landscape metrics: available agricultural land, forest cover gaps, edge density metric, proximity to river, 200 m corridor area, total forest core area metric, fringe core area, distance to primary core value, and primary core area. The multi-criteria analysis revealed that high priority areas for reforestation were most likely to be close to the riparian corridor and existing large blocks of forest. Analysis of simulated reforestation (0, 0.5, 1.0, 5.0, 10.0, 25.0, and 50.0% of highest priority parcels reforested) revealed different responses for multiple landscape metrics used to quantify forest fragmentation following reforestation, but indicated that the KRC would get the greatest rate of return on reforestation efforts by reforestering 10.0% of the highest priority areas. This project demonstrates how GIS and a multi-criteria analysis approach can be used to increase the efficiency of restoration projects. This approach should be considered by land managers when attempting to identify the location and quantity of area for restoration within a landscape.
From 1848 to the end of Reconstruction, ideas about the influence of land use on social structure shaped politics in the United States. Widespread concern over Union, proper cultivation, and civilization showcase the agrarian outlook of northern society in the mid-19th-century.

Chapters one and two focus on how the Free Soil & Republican parties defined the slave South as different from the rest of America despite sharing a common religion, history, and language. Beginning in the 1850s, many Americans defined civilization as a society allowing for material abundance and intellectual growth. Anti-slavery activists labeled slavery as an impediment to civilization because the institution restricted land ownership, denied access to education, and allowed barbaric habits to thrive. Slavery also threatened the perpetual Union. Republicans worried that slavery extension would prevent distant territories from joining the United States and allow aristocrats worldwide to mock American democracy. Finally, while a few historians have thought of the Civil War as a clash between the "agrarian" South and the "industrial" North, the majority of people living in free states resided on farms. Northern farmers believed that slave plantations exhausted the soil, creating an insatiable thirst for new land to exploit. Republicans promised them that the government would not allow slavery's wasteful hands to touch new territories in the West. This information allows historians to better understand why people in the 1850s opposed slavery's extension.

Chapter three shows how these ideas led to the formation of Union nationalism during the Civil War. With the exception of works by Melinda Lawson and T. Michael Parrish, wartime northern nationalism has received little attention from Civil War scholars. Belief in a perpetual Union prompted aggressive efforts to bind the pacific West to America. A desire to promote agricultural permanence and civilization led Republican politicians to pass the Land Grant College Act, the Homestead Act, the Pacific Railroad Act, and create the United States Department of Agriculture. Finally, northerners who joined the U.S. Army in 1861 carried their antebellum impressions of the South with them, writing that the region appeared uncivilized and its lands poorly cultivated.

Chapter four examines the role of ideas about civilization and Union in the creation of Yosemite State Park in 1864 and Yellowstone National Park in 1872. Making areas of scenic beauty accessible to everyone highlighted the value of republican government. Everyone, not just the wealthy and powerful, needed to experience "sublime" scenery. Park supporters also argued that nature advanced the
mind – making visitors more civilized. This chapter provides a new explanation of why the United States government created public nature parks.

Chapter five argues that during Reconstruction, ideas about civilization, Union, and land use influenced Republican plans to change the South and American West. This section incorporates the history of the American West into Reconstruction. Republican perceptions of the South and West as deficient in civilization, proper land use, and commitment to the Union formed the basis of Reconstruction policy for both regions.

Analysis of agritourism in Arkansas and Slovakia: Strengths, weaknesses, opportunities and threats

In recent years, agritourism has been growing in importance as a development strategy for rural locations in the United States and Europe. However, there has been limited research examining the opportunities and shortcomings this new economic avenue presents. Thus, in this study I examine the changing economic dynamics in rural America and Europe and explore the role agritourism may play in alleviating some of the recent negative economic manifestations in many rural locations. Surveys are conducted of agritourism providers in Arkansas in the US and Slovakia in Europe, to ascertain their outlook on their agritourism operations and to discover any challenges they have overcome or foresee on the horizon. The information from the surveys is combined with secondary data to develop a SWOT analysis for agritourism providers in the two regions.

An analysis of the critical success factors for participation in agricultural-environmental programs: A case study

This research identifies the critical success factors for a 'Payments for Ecological Goods and Services' (PEGS) approach for conservation programs from farmlands, and insight into the decision-making in choosing whether to participate in a PEGS approach. My research draws on experiences incurred during a pilot phase of Alternative Land Use Services, a mechanism to deliver Environmental Goods and Services in Norfolk County, Ontario. My proposition was that trust and social capital are critical success factors in eliciting participation in PEGS programs from farmlands in Ontario. The critical success factors that emerged from my research included social capital and trust, as well as: participatory processes, community
capacity, program simplicity, confidentiality, and communication and expectations management. I also tested a conceptual framework that focused on a farmer's decision-making process in choosing whether to participate in a PEGS program. I found that social and community characteristics had a significant influence on procuring participation.

**An analysis of community-based psychosocial and economic reintegration efforts by young mothers formerly associated with armed groups in Sierra Leone**


This thesis analyzes the results of a participatory action research (PAR) study designed to support a group of young mothers formerly associated with armed groups to become empowered to make their own choices about their reintegration needs. The analysis suggests that participation in the PAR study helped the young mothers more fully reintegrate with their communities by repairing their access to social capital, defined here as "the norms and networks that facilitate collective action." To accomplish this they engaged in activities that exhibited normative social behaviors, cooperation, and reciprocity, which earned them respect and improved their status in their families and communities. More holistic efforts incorporating both economic and social activities appeared to have the most sustainable outcomes.

**An analysis of greater prairie-chicken demography in Kansas: The effects of human land use on the population ecology of an obligate grassland species**


Greater prairie-chicken (Tympanuchus cupido) populations have been reduced by >70% since the turn of the 20th century due to large-scale conversion of native prairie habitats to cultivated agriculture and other human development. Although Kansas is considered a stronghold for greater prairie-chickens, statewide populations have declined >30% in the last 30 years. Goals of this dissertation were to determine the demographic mechanisms for apparent population declines and evaluate how regional variations in landscape composition and grassland management affect the demography, habitat use, life-history, and population viability of three populations of greater prairie-chickens. First, I found that, despite high reproductive potential, poor reproductive success prevented populations from being self-sustaining. All three populations were projected to decline but finite
rates of population declines were different among populations ($\phi = 0.49$, 0.54, and 0.74). I found that grassland fragmentation and rangeland management practices influence nearly every aspect of greater prairie-chicken population ecology and dynamics. A population in a contiguous prairie landscape managed with annual spring burning and intensive early stocking of cattle (South) was characterized by delayed breeding, low nest and brood survival (0.08-0.18 and 0.27, respectively), high annual survival of mature females (0.64-0.71), projected age-ratios heavily skewed toward adults, and longer generation times. Conversely, a population in grasslands heavily fragmented by cultivation and managed with longer fire-return intervals and moderate grazing (Smoky) initiated nests earlier, had higher nest and brood survival rates (0.16-0.31 and 0.34, respectively), produced significantly larger eggs, and had low annual survival (0.34-0.42) and shorter generation times. A site with intermediate levels of fragmentation, burning and grazing (North) had intermediate demography. Finite population change was more sensitive to changes in adult survival at all sites, but the relative influence of fecundity parameters on projected population change was not similar among study populations. Data indicate that differences in rates of decline among populations were largely due to variation in adult survival mediated by human landscape alteration. Human-mediated changes to grasslands impact the demography and viability of prairie-chicken populations, influence population sensitivities to changes in vital rates, and mediate changes in the life-history strategies of a grassland-sensitive species.

An empirical study of the economic determinants of food security

This study investigates the relationship between food security and economic factors. Using the seemingly unrelated regression technique, the paper uses an unbalanced panel of 43 countries between 1992 to 2008 to empirically analyze the relationship between indicators of food security (food gaps and food-insecure populations) as dependent variables and foreign trade, foreign aid, and financial development as explanatory variables. In two sets of regressions involving food security equations, openness to foreign trade (defined as the sum of imports and exports in gross domestic product), foreign aid, political stability and geographic dummies were found to be correlated with food security measures. Data are obtained from various sources including the U.N. Food and Agriculture Organization, the U.S. Department of Agriculture, the International Monetary Fund, the World Bank and the Penn World Tables. The paper concludes with policy recommendations specifically related to how the World Trade Organization can ensure a level playing ground for international trade among poor and rich...
countries so that developing countries can reap benefits from foreign trade in order to improve their food security situation.

Food security is defined as the availability of sufficient and affordable food to all peoples at all times needed for a healthy and productive lifestyle. Measures of food security range from the amount of food needed to reach a predetermined daily calorie requirement per person per day, to child and adult malnutrition statistics, to the population of the hungry. However, important economic factors alone, such as foreign trade, foreign aid and financial development, are not all conclusive in explaining food security. The study therefore further explores the role of political stability and physical agricultural infrastructure, such as irrigated area in total arable land, in food security outcomes across time and space.


"A Pan-African Imagined Community" is a multilayered exploration of black internationalism that highlights the linkages between Africa and its diaspora at the points of both theory and praxis. It illuminates how Pan-African bonds were solidified and challenged when Jamaican Rastafarians sought the ideological and physical realization of repatriation to Africa in post-colonial Tanzania. Drawing on previously undiscovered archival documents and oral sources, my work offers a nuanced examination of how notions of Pan-African solidarity are forged and complicated by the realities of economics, law, culture and religion.

A place for environmental refugees: Adaptation to climate and environmental change in South Asia

This thesis investigates climate-related environmental change as a distinct threat to the low-lying coastal zones of South Asia, particularly among vulnerable populations in Bangladesh and Maldives. With the objective of identifying adaptive strategies against erosion and inundation in low-lying coastal zones, the thesis examines planned relocation as an adaptive to response to climate-related environmental threats.
Applying humanistic theory to the practice of community development: Exploring humanistic psychology's potential to address the human problems of today


This theoretical dissertation seeks to identify and expand some of the core concepts in humanistic psychological theory through a content analysis of humanistic literature and related sources. The purpose of this process is to explore how humanistic theory may become relevant to communities that share vastly different socioeconomic, political, and ecological circumstances than people who have primarily become familiar with humanistic theory through individual counseling or academic inquiry. It is argued that humanistic psychology's principles of emancipation and positive growth provide a useful framework for community development. In the process of analysis, eight thematic categories emerged: Fundamental Human Needs, Freedom, Process of Change, Empathy, Cognitive Understanding and Awareness, Interconnection, Responsibility, and Ethic of Care. The resulting categories are applied to community development in Guatemala, notably to the researcher's case study of Association Ija'tz, a Maya community in San Lucas Tolimán, Guatemala.

Architecture as a tool in empowering marginalized communities


This thesis proposes a design that explores the notion of serving the underserved. It also examines the position of the architect, one that is participatory and where student, teacher, and architect are intertwined. The design proposal is set within a settlement near El Kef, Tunisia and looks at how implicating it in the development process is a paradigm shift that may provide an opportunity to diminish reliance on foreign aid and resources.

The design approach pays particular attention to cultural context, Arabic architecture and vernacular, and operates on the principle of using locally sourced materials as a method to link the less tangible human experiences: dialogue, dignity, empowerment, and a settlement's transition from occupying to inhabiting the land. In the process, architecture has the potential to act as a catalyst for change, simultaneously engaging and learning from those in the community.
Assessing Integrated Conservation and Development in Indonesia

This dissertation investigates the linkage between biodiversity conservation and sustainable development. It seeks to discover ways that the practice of tropical biodiversity conservation can be socially just and meet its goals of habitat and species preservation. By assessing four Integrated Conservation and Development Projects (ICDPs) conducted in Indonesian National Parks during the 1990s, this qualitative research describes the lasting impacts of each one, and seeks to explain which aspects of these projects were successful and sustainable and why. Although ICDPs are often regarded as failures, a closer look reveals some more nuanced results, providing insights regarding best practices for reconciling the conservation of biodiversity with the improvement of human well-being.

As a small-N case study comparison, this study combines positivist and interpretivist approaches. Field research was conducted mainly through open-ended, semi-structured interviews and review of archival records. The process of implementation of each ICDP was traced and compared with the other case studies to evaluate the relative success of each project.

The four major findings and contributions of this dissertation address three overarching themes: effectiveness of biodiversity conservation efforts, socially just biodiversity conservation, and sustainable rural development. First, small-scale and community-level development projects are inadequate (and relatively ineffective) conservation tools. They can be helpful incentives, but only in a context where there is rule of law, effective and sufficient law enforcement, and good governance. Incentives are not sufficient for protection of biodiversity. Local communities do not present the main threat to biodiversity or ecosystems, and focusing on them can be a distraction from more pressing threats to conservation, such as ineffective systems of governance.

Second, good governance is the best protection for biodiversity and people. The best model in the context of parks is one of adaptive co-management where all stakeholders have a seat at the table, and policies and solutions are reached collaboratively. Third, short-term donor-driven conservation projects are unsustainable by nature. There is an urgent need in conservation for greater commitments of time and continuity of actors on the ground. Finally, human development and certain types of infrastructure development are more compatible with biodiversity conservation than economic development.
Assessment of trends in desertification: A proposed methodology


Desertification is most commonly accepted as "land degradation that occurs in arid, semi-arid, and dry sub-humid areas as a result of climatic variations and human activities." Primary influences include over-grazing, over-cultivation, exploitation of water resources and climate. Such influences lead to reduced productive capacity of land and potentially, desert-like conditions. Once degraded, the recovery of these natural systems may take decades or centuries.

This research focused on two environments as case studies, Saskatchewan, Canada, and Bangladesh. Forecasts of desertification were depicted by integrating observed meteorological data, general circulation model (GCM) projections and a range of physical, biological and social indicators to create maps that depict the regions at greatest risk of desertification. Using GIS software, a thematic layer was employed for each indicator and they were integrated to form a single map of desertification. This methodology was found capable for identifying areas at risk of desertification in Saskatchewan and Bangladesh.

Assessment of the extent, rate and socio-economic impact of agricultural land loss in the urban fringes of Accra from 2000 to 2008


This thesis explores the nature and socio-economic effects of the rapid and haphazard spatial growth of the city of Accra, Ghana leading to spillovers into the peri-urban areas. Both geospatial techniques (GIS and Remote Sensing) and field survey (questionnaires and informal interviews) were employed in this study.

The findings show that land use changes indeed are occurring as more housing construction takes up land in formerly agricultural areas. Landowners were found to be more reluctant to sell their land parcels, an indication that land was getting scarce. Many of the local people surveyed indicated that their state of living has worsened since 2003. Residents engaged in farming were identified as having higher chances of enjoying a better living condition than those who do no farming. Most affected individuals too are surviving by adopting certain coping strategies - basically adjusting their spending habits according to the prevailing economic conditions.
Using a conceptual bio-physical/social systems model, this national study of Severe Repetitive Loss (SRL) flooding investigates cost and loss trends, the descriptive characteristics of these geographies and populations, both now and in the future. It also assesses the effectiveness of the Community Rating System and its policies in dealing with these repetitive natural hazards.

Descriptive findings demonstrate that SRL properties in both very-high and high-risk coastal and non-coastal areas are increasingly at greater risk in terms of both absolute losses and property damage. Coastal areas are increasingly populated by white, middle-class households and have experienced extraordinary population increases over the last 30 years. Non-coastal areas tend to be more diverse both demographically and in terms of income. With few exceptions, the median income of vulnerable populations in both coastal and non-coastal areas tends to be lower than the national average. Based on a future risk assessment, those communities more likely to be impacted from future flooding vary, as payouts per capita and median income are positive and significantly related in coastal and major river areas, while negatively correlated near creeks and other non-coastal areas. Overall, the impacts of severe repetitive losses are felt by disparate groups as a function of ecology, society and economics. Program and policy findings include: the CRS program effectively mitigates per capita losses overall, though certain policies are more effective, significantly lowering losses in these areas. These effective policies share some common characteristics as they tend to mimic ongoing ecological processes, prove collective in scope and nature (whether it is manufactured home park or stormwater regulations) and require action and investment at larger scales. Regulations that target individual homeowners prove significantly correlated with increased losses.

Policy recommendations include targeted policy changes and programmatic responses based on three criteria: ability to pay, risk/vulnerability and governance capacity. These recommendations include (1) Elimination of insurance support or lowering of premium subsidies based on ability to pay; and (2) The creation of targeted mitigation programs in high-risk neighborhoods and municipalities. These programs should incorporate identified "effective" CRS policies. 

A tool for solving land use conflicts? – A study in TDR in Taiwan
TDR has been widely applied for various purposes since its emergence. The effectiveness of TDR programs has to do with many factors, such as the strength of market demand, availability of incentive packages, appropriateness of the designation of suitability receiving sites, degree of public acceptance, availability of a TDR bank, and leadership of responsible planners. By examining six of Taiwan's TDR programs and administering a questionnaire survey to get feedback from key shareholders, namely planners of the public sector and private developers, the study found that Taiwan's fundamental TDR institutions are not properly provided for. The major problems with Taiwan's TDR practice include unclear TDR policy, incomplete regulation, insufficient public support, inexperienced program design skill, no incentive package, no TDR bank, and the neglect of the impact of TDR on urban development. To improve the overall efficiency of Taiwan's TDR practice, the study further suggests some effective strategies to deal with these problems. It is expected that, through the refinement of the required TDR institutions, the overall efficiency of Taiwan's TDR programs can be greatly improved.

A vision of transformation: Women's organizing and development in Guatemala


This thesis presents an analysis of research I conducted with Somos Mujeres, a community-based women's organization in Guatemala. The sisters who founded the organization subscribe to a comprehensive model of women's development that attempts to address the underlying social, economic, and political factors that perpetuate women's inequality. I examine the evolution of Somos Mujeres' mission and programs, and I explore the impact of the organization on the lives of women who join. I argue that this holistic approach holds the promise of broad change. However, formidable barriers prevent the organization from implementing its mission. Lack of resources, limited access to the global handicraft market, as well as pressure from outside funding organizations undercut the organization's ability to implement its vision. This study highlights the challenges community-based organizations face at the ground level as they negotiate the development sphere. I argue that the mission and programming of Somos Mujeres is shaped not simply by the interests of the women the organization serves, but also by the agendas of powerful donor institutions, and I consider potential avenues of change that could provide community-based organizations greater power to determine the course of their own development.
Behind the Chilean farmed salmon commodity chain: Conflicts, struggles, and manoeuvres


In the last decade, salmon farming – a big scale capitalist operation – was established and developed within the isolated territory of the Los Lagos Region in the south of Chile. This dissertation describes the salmon farming commodity chain in the region and its impacts on local nature and human actors. It also examines global and local counter-hegemonic practices that respond to those impacts, as well as civil society practices of resisting, negotiating and maneuvering that seek to embed the salmon farming commodity chain into social regulatory frameworks.

I attempt to reconstruct the process by which the salmon farming industry, the local community, and the local civil society articulate, conflict, negotiate, and maneuver around their contradictory interests over the use of the marine environment and the organization of labor. The main hypothesis of this research is that, although it is a powerful global force, the salmon industry as it has developed in southern Chile does not operate in a vacuum. It can and has been effectively contested by organized local communities in alliance with international actors. However, this contestation is more complex than simple resistance. It involves heterogeneous practices of negotiation and maneuvering among the different actors involved and, as such, has a major impact on the operation of the salmon commodity chain and on social regulation of the salmon industry. In other words, the organized groups that challenge the operation of the salmon industry in this particular Chilean region cannot be adequately described as local actors merely resisting a structurally driven globalization process. Rather, it is necessary to explore how the actions of both community and civil society/third sector associations have contributed to re-shaping that process in general and the characteristics of the salmon commodity chain in particular.

To address these issues I use an eclectic theoretical framework that combines elements from a political economy perspective. I first use commodity chain analysis as a methodological tool to follow the process of the creation and destruction of value. I then draw on several elements from substantive economy, actor network theory, and gramscian analysis in order to follow the different actors in civil society, how they create power through associations, and how they are more or less able to embed the commodity chain into a framework of social regulation.
Beneficial Management Practice (BMP) Adoption by Canadian Producers


Agricultural activities alter landscapes to produce food and fiber and can pose a risk to the health of the soil, water and air, and impact biodiversity. The environmental impact of agriculture is largely influenced by the management practices implemented on farms. Beneficial management practices (BMPs) can help mitigate risk to the environment and improve the health of the soil, water, air and biodiversity. In order to develop effective agri-environmental policies and programs to promote environmental sustainability, decision-makers at all levels of government require science-based information on the environmental performance of agriculture, including information on practices being implemented on the farm. Information about BMP adoption in Canada has, until now, been largely fragmented and not widely available. In this study I developed a BMP Adoption Index, which is a reporting tool that measures the level BMP adoption in Canada and can be used to inform policy and program development. The BMP Adoption Index suggests that average adoption by both crop and livestock farmers across the country is in the medium range, with producers implementing more BMPs in areas where agriculture is a dominant land use. BMP Adoption across Canada does not appear to be motivated by a particular environmental issue or high environmental risk. Further investigation to identify the drivers of BMP adoption will enable decision makers to help farmers increase BMP adoption where they will be best able to mitigate the environmental risks of agriculture.

Bringing medicine to the Hamlet: Exploring the experiences of older women in rural Bangladesh who seek health care


The purpose of this study was to explore the experiences of older women in rural Bangladesh who seek health care. Qualitative methods were used to collect data from 17 older women in Bibirchar Union, Sherpur District, Bangladesh in June 2006. The study is intended to generate findings to help policy makers plan appropriate strategies to improve the health of this highly vulnerable population group.

The findings reveal that women's culturally and socially determined roles greatly impair their health and play an important role in health-seeking behaviour through a complex web of social, economic, religious/cultural and behavioural interrelationships and synergies that pervade every aspect of their lives. Both
demand factors - which include age, gender, cost, quality, geographic accessibility, availability of resources, the seriousness of the condition, and traditional and religious beliefs - and supply factors which include health system barriers such as perceived high cost of health services, geographical distance, scarcity of female health workers, understaffing, inadequate supply of drugs, discrimination and disrespectful treatment based on class, age and gender lead to reduced use of health services.

The social determinants of health perspective informing the study shapes the conclusion that there is an urgent need for changes to the publicly funded health care system that would make it more accessible to older women in Bibirchar. These changes include ensuring an adequate supply of medications and equipment in the primary health centres, provision of free medications, and training of health service providers in geriatrics. Further, it is recommended that the referral system among the various health services be strengthened, collaboration between traditional health providers and modern health providers be provided, and that spiritual beliefs be integrated into health care provision. Training in how to treat older patients respectfully is recommended for all health providers working in government-funded organizations as is the hiring of more female health care providers. Incentives to attract physicians to work in publicly-funded facilities in rural areas are suggested and provision of free hospital and preventive testing services for older adults.

In the longer term, recommendations are made that would increase the status, respect and resources commanded by older women in Bangladesh. These include health promotion programs to change public attitudes about the importance of providing health care to older women, investment in the social development of rural areas in Bangladesh, empowering local communities in health care decision making, and enhancement of economic opportunities for women. Finally a need is identified to redefine health from a limited understanding of it as "the absence of disease" to one grounded in a determinants of health perspective.

**Building consultation from the bottom up: A case study of the North Yukon**


The Canadian north is a land of sparse human population and a wealth of natural resources - both renewable and non-renewable. Global demands for such resources create a dynamic where exploitation in its many forms brings powerful forces to bear on small northern communities and indigenous governance bodies. Consultation, in a general sense, is the means for bringing divergent interests together to resolve resource management issues and ensure that development is
conducted with the community's best interest in mind. In a legal sense, consultation protects First Nations from potential aboriginal or treaty right infringement. Consultation as defined in legislation is too broad to direct a meaningful and adequate process. It is necessary for First Nations to define consultation in their own terms. This thesis outlines and discusses the principles and procedures for guiding consultation in Old Crow, YT.

**Burning through Boundaries: Collaborative Governance and Wildland Fire Planning in the United States and New South Wales, Australia**


Wildland fire is a complex socio-ecological phenomenon that 'burns through' environmental, organizational, and geo-political boundaries. The management of wildland fire has emerged as both a crucial hazard management concern and a critical conservation priority as those living in fire-prone ecosystems experience more severe fire events and altered fire regimes contribute to biodiversity loss. This research examines two policies - the Healthy Forests Restoration Act of 2003 in the United States and the 1997 Rural Fires Act in New South Wales (NSW), Australia - which both seek to enhance inter-organizational coordination and integrated management by mandating collaborative wildland fire planning within legislation. This 'top-down' approach is a departure from previous forms of collaborative environmental management that view collaboration as an emergent and voluntary process. Thus, it is unclear whether mandated collaboration fosters the flexible governance, positive social outcomes, and innovative management associated with 'bottom-up' collaboration. Taking a multiple case study approach, I explore this question in four chapters, examining, in particular: (1) social learning processes in US collaborative wildland fire planning groups, (2) development of inter-organizational communication networks in NSW bushfire planning groups, (3) processes through which participants in NSW planning groups 'co-construct' the fire environment, and (4) modes of governance upon which the US and NSW policies draw and the influence of these governance modes on collaborative processes and outcomes.

Most broadly, I find that wildland fire planning processes and outcomes are dependent on the design of the policy mandate for collaboration, as well as planning context. For example, US wildfire planning groups had to commit to a learning-centered process on the local level, but the design of the policy mandate for collaboration influenced the type of learning that was most likely to occur. Additionally, the legislative mandate for collaboration in NSW fostered the creation of more active inter-organizational communication networks during
planning than they had been prior, with important mediating factors such as group size and history of inter-organizational conflict. I also find that the imposition of a standardized planning template led to risk being the primary organizing feature of planning in NSW, promoting the co-construction of a governable fire environment that was not necessarily amenable to achieving broader, landscape-level ecological goals. Though both the NSW and US policies were created with similar goals, each draws upon distinct modes of governance to structure collaboration. The bureaucratic NSW policy focused planning towards strategic outcomes, while the network-based US policy facilitated positive relational outcomes.

This dissertation has implications for collaborative environmental planning theory and practice, begins to evaluate mandated collaboration as a public policy tool, and contributes to international discussions on sustainable wildland fire policy and planning. Policy-mandates create the structural context for multi-stakeholder collaboration, but do not facilitate meaningful collaborative planning processes on their own. Mandates must be met with strong leadership, diverse participation, facilitation, and innovation on the local level. When designing collaborative mandates, policy-makers need to consider the balance of flexibility and administrative direction within the policy structure. Though bureaucratic directives may promote accountability, standardization, and strategic planning, they may also limit innovation on the local level, place power and influence in the hands of a few organizations, and promote specific (and perhaps narrow) understandings of the environment and the 'appropriate' means by which to manage it. Conversely, flexible policy mandates for collaboration may allow for contextual interpretation on the local level and facilitate positive social outcomes, but may also promote limited accountability and be met by a limited set of players with 'business-as-usual' approaches to management. However, in a context as dependent on coordination as wildland fire management, mandated collaboration represents a positive public policy innovation by providing a forum for inter-organizational interaction and coordinated planning. Yet, as large fires continue to be a prominent feature of certain landscapes, addressing both hazard reduction and ecological conservation objectives will be a consistent challenge. Policies need to provide substantive guidance and procedural direction on how to achieve broader conservation goals within fire management and planning.
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Telephone : 022-24374789, Fax : 091-022-24374790; email : isae@bom7.vsnl.net.in; website: www.isaeindia.org
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